CLAIMS

[1] A gas detection method, in which a target gas is detected while oxygen is supplied to a sensor element of a metal oxide-type gas sensor,

wherein the target gas is detected while water vapor is supplied to the sensor element.

[2] The gas detection method according to Claim 1, wherein the target gas is a component gas separated in a separation column.

[3] A gas detection apparatus equipped with an oxygen supply means for supplying oxygen to a sensor element of a metal oxide-type gas sensor,

said gas detection apparatus being provided with a water vapor supply means for supplying water vapor to the sensor element.

[4] The gas detection apparatus according to Claim 3, wherein humidified oxygen is obtained by using water vapor supplied from the water vapor supply means to humidify oxygen supplied from the oxygen supply means, and this humidified oxygen is supplied to the sensor element.

[5] The gas detection apparatus according to Claim 4, wherein the humidified oxygen is obtained through oxygen supplied from the oxygen supply means into water used for producing water vapor and stored in the water vapor supply means.

[6] The gas detection apparatus according to Claim 4, wherein the relative humidity of the oxygen in the humidified oxygen is at least 40%.

[7] The gas detection apparatus according to Claim 4, wherein the relative humidity of the oxygen in the humidified oxygen is from 40 to 80%.

[8] The gas detection apparatus according to Claim 4, wherein the humidified oxygen is supplied to the sensor element at a substantially constant flow per unit of time during the gas detection operation performed by the metal oxide-type gas sensor.

[9] The gas detection apparatus according to Claim 3, wherein the gas detection apparatus is equipped with a separation column for separating the target gas into a plurality of component gases, and the target gas detected by the metal oxide-type gas sensor is a component gas that has been separated by this separation column.

[10] The gas detection apparatus according to Claim 9, wherein the component gas and the humidified oxygen are supplied separately in substantially the same direction to the sensor element.